

## CLAIMS

1. A desktop thermal lens microscope apparatus, the desktop thermal lens microscope apparatus being a thermal lens microscope that is arranged to have a construction wherein an excitation light and a probe light are entered into an optical microscope; and the probe light is entered into a thermal lens formed by the irradiation of the excitation light into a specimen, whereby the detection of substances in the specimen is performed by measuring the diffusion of the probe light resulting from the action of the thermal lens, the desktop thermal lens microscope apparatus being characterized in that the apparatus is equipped with small-sized laser light sources serving, respectively, as an excitation light source and a probe light source; and the excitation light source, the probe light source, and a thermal lens microscope optical system are integrated together in a single housing.

2. A desktop thermal lens microscope according to claim 1, characterized by being equipped with a chopper in order to perform lock-in amplifier signal processing and with a modulation mechanism that performs PLL control of the drive of the chopper and that thereby performs modulation of the excitation light.

3. A desktop thermal lens microscope apparatus according to claim 1, characterized by being equipped with a diffraction grating by means of which the probe light and the excitation

light are separated from each other to thereby extract only the probe light alone.

4. A method for performing a chemical analysis, characterized by including a step of performing a chemical analysis of a very small value of quantity in a micro spatial region on a chip with the use of the desktop thermal lens microscope according to any one of claims 1 to 3.